

## **Building a knowledge-based system for river water quality management.**

### **ABSTRACT**

Managing water quality is considered most challenging due to the multitasking decision making and the necessity of the convergence of opinion by multidisciplinary experts in the field. Many decision making models have been developed with various application tools for water quality management. Knowledge-base system-river water quality (KBS-RWQ) is a system developed using visual basic as the language platform to assist non experts in decision making in managing water quality. Application of the pollutant load concept by using the load duration curve to determine the status of water quality is the basis for the KBS-RWQ. The objective has been to support decision making addressing the following: determine the load capacity of the selected river; evaluate the field data; decide on the source of pollutant; and select control strategies. Deterioration of water quality with health threats to human kind are the result of poor planning and decision making of the past. By combining the the capable modeling technique, databases, and expert intelligence, the KBS-RWQ will improve the quality of the decision making.

**Keyword:** Water quality; Water quality management; Knowledge-base system-river; Water quality.